

543 076

Rec'd PCT/PTO 13 JUL 2005

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number  
**WO 2004/064379 A1**

(51) International Patent Classification:  
A61B 6/00

H04N 1/00,

[NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven  
(NL).

(21) International Application Number:

PCT/IB2003/006324

(72) Inventor; and

(75) Inventor/Applicant (for US only): ECK, Kai [DE/DE];  
c/o Philips Intellectual Property & Standards GmbH, Weiss-  
shausstr. 2, 52066 Aachen (DE).

(22) International Filing Date:

16 December 2003 (16.12.2003)

(74) Agent: VOLMER, Georg; Philips Intellectual Property &  
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03100075.5

16 January 2003 (16.01.2003) EP

(71) Applicant (for DE only): PHILIPS INTELLECTUAL  
PROPERTY & STANDARDS GMBH [DE/DE]; Stein-  
damm 94, 20099 Hamburg (DE).

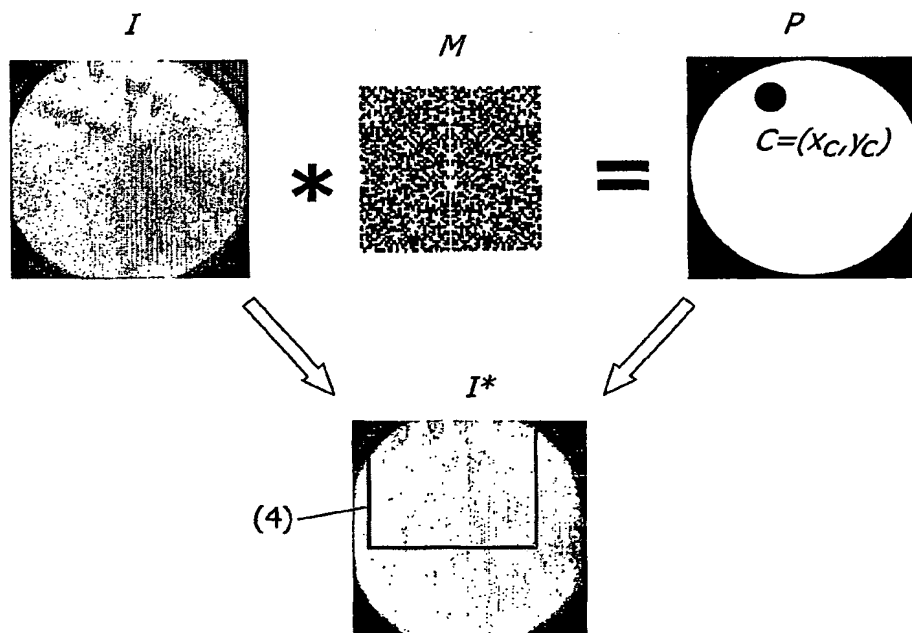
(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,  
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,  
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except DE, US):  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

(84) Designated States (regional): ARIPO patent (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: METHOD OF DETERMINING THE POSITION OF AN OBJECT IN AN IMAGE



(57) Abstract: The invention relates to a method of determining the position of an object in an (X-ray) image (I). A pattern of marking elements is attached to the object., wherein the marking elements are not visibly evident individually in the image (I), i.e. they form an invisible "watermark". By means of a correlation between the image (I) and a filter image (M) of the pattern of marking elements, however, the position of the marking elements, and thereby that of the object, can be localized in the image (I).

BEST AVAILABLE COPY

WO 2004/064379 A1